

Notice of Allowability

Application No.

09/577,601

Applicant(s)

LOOSMORE ET AL.

Examiner

Art Unit

Zachariah Lucas

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Response of August 16, 2005.
2. ☒ The allowed claim(s) is/are 5,8,11 and 44.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>8-16-05</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Status of the Claims

1. Currently, claims 5, 8, 11, and 44 are pending and allowed.
2. In the prior action, mailed on February 16, 2005, claims 5 and 8-11 were pending, under consideration, and rejected. In the Response filed on August 16, 2005, the Applicant amended claims 5 and 11, cancelled claims 9 and 10, and added new claim 44.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on August 16, 2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Claim Rejections - 35 USC § 103

4. **(Prior Rejection- Withdrawn)** Claims 5 and 8 were rejected in the prior action under 35 U.S.C. 103(a) as being unpatentable over Bass et al, J. Bacteriology (Bass), 178:1154-61, in view of the 1998 article (Loosmore et al., Infection and Immunity, 66(3): 899-906), and U.S. Patent number 5,474,914, issued to Richard Spaete (the Spaete patent). Claim 5 has been amended to limit the claimed vector to embodiments wherein the Hin47 protein is acting as a chaperone for the Hia protein. The Applicant traversed this rejection on the basis of a teaching in Kim (JMB 294: 1363-74- of record in the IDS of August 2005), which indicates that the Hin47 protein is capable of acting as a chaperone only for certain specific proteins. See, page 1371, left column. Because the current application teaches that the combination of the Hin47 analog

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described in the claims provides unexpected results to the expression of the Hia protein through its chaperone activities with respect to this protein, the claimed inventions are deemed to be non-obvious over the prior art. For these reasons, and in view of the amendment of the claims limiting them to embodiments wherein the Hin47 analog is being used as a chaperone for the Hia protein, and as there are no teachings in the art indicating that the Hia protein is a protein for which Hin47 acts as a chaperone, the rejection is withdrawn.

5. **(Prior Rejection-Withdrawn)** Claim 9 was rejected under 35 U.S.C. 103(a) as being unpatentable over Bass, in view of the 1998 article, and the Spaete patent, and further in view of Barenkamp and St. Geme III, Molecular Microbiology 19:1215-23 (Barenkamp), and U.S. Patent Number 6,335,182 (the 182 patent). This claim has been cancelled from the application. The rejection is therefore withdrawn.

6. **(Prior Rejection- Withdrawn)** Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Bass, the 1998 article, Spaete, and Barenkamp as applied above, and further in view of St. Geme et al. (WO 96/30519). This claim has been cancelled from the application. The rejection is therefore withdrawn.

Double Patenting

7. **(Prior Rejections- Withdrawn)** Claims 5 and 8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10, 17, 19 of U.S. Patent No. 5,939,297 and over claims 1, 5, and 6 of U.S. Patent No. 6,025,342. These rejections are withdrawn for substantially the same reasons as indicated above with respect to the obviousness rejection of claims 5 and 8.

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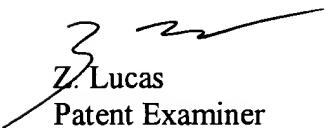
8. **(Prior Rejection- Withdrawn)** Claim 9 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over either claims 1, 5, and 6 of U.S. Patent No. 6,025,342 or claims 10, 17, 19 of U.S. Patent No. 5,939,297 as applied above, further in view of Barenkamp and St. Geme III, Molecular Microbiology 19:1215-23. This claim has been cancelled from the application. The rejection is therefore withdrawn.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachariah Lucas whose telephone number is 571-272-0905. The examiner can normally be reached on Monday-Friday, 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached on 571-272-0902. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Z. Lucas
Patent Examiner


JAMES HOUSEL
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10/17/05